

Pediatric Quality Indicator 12 (PDI 12) Central Venous Catheter-Related Blood Stream Infection Rate

July 2021

Hospital-Level Indicator

Type of Score: Rate

Prepared by:

Agency for Healthcare Research and Quality

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www.qualityindicators.ahrq.gov**DESCRIPTION**

Central venous catheter-related bloodstream infections (secondary diagnosis) per 1,000 medical and surgical discharges for patients ages 17 years and younger. Includes metrics for discharges grouped by risk category. Excludes cases with a principal diagnosis of a central venous catheter-related bloodstream infection, cases with a secondary diagnosis of a central venous catheter-related bloodstream infection present on admission, normal newborns, neonates with a birth weight of less than 500 grams, cases with stays less than two (2) days, and obstetric cases.

[NOTE: The software provides the rate per hospital discharge. However, common practice reports the measure as per 1,000 discharges. The user must multiply the rate obtained from the software by 1,000 to report events per 1,000 hospital discharges.]

NUMERATOR

Discharges, among cases meeting the inclusion and exclusion rules for the denominator, with a secondary ICD-10-CM diagnosis code for central venous catheter-related bloodstream infection (**IDTMC3D***).

Note: The Numerator definition is identical for Overall, High, Intermediate, and Low Risk Categories.

DENOMINATOR OVERALL

Surgical (**Appendix C: SURGI2R**) or medical (**Appendix E: MEDIC2R**) discharges, for patients ages 17 years and younger. Surgical and medical discharges are defined by specific MS-DRG codes.

[Appendix C - Surgical MS-DRGs](#)

[Appendix E - Medical MS-DRGs](#)

DENOMINATOR OVERALL EXCLUSIONS

Exclude cases:

- with a principal ICD-10-CM diagnosis code, or secondary ICD-10-CM diagnosis code present on admission, for central venous catheter-related bloodstream infection (**IDTMC3D***).
- normal newborns (**Appendix I**)
- neonates (**Appendix I**) with birth weight less than 500 grams (Birth Weight Category 1) (**Appendix L**)
- with length of stay less than two (2) days
- MDC 14 (pregnancy, childbirth, and puerperium)
- with an ungroupable DRG (DRG=999)
- with missing gender (SEX=missing), age (AGE=missing), quarter (DQTR=missing), year (YEAR=missing) or principal diagnosis (DX1=missing)

Note: The Denominator Exclusions are identical for Overall, High, Intermediate and Low Risk Categories.

[Appendix I - Definitions of Neonate, Newborn, Normal Newborn, and Outborn](#)

[Appendix L - Low Birth Weight Categories](#)

Discharges are stratified into risk categories based on highest severity diagnosis or procedure. Risk Categories are mutually exclusive. Discharges cannot qualify for more than one stratum.

DENOMINATOR HIGH RISK CATEGORY

Patients otherwise qualifying for overall denominator with either:

- any listed ICD-10-CM diagnosis code for high-risk immunocompromised state (**Appendix F: IMMUNHD**)
- any listed ICD-10-PCS procedure code for high-risk immunocompromised state (transplant) (**Appendix F: TRANSPP**)
- any listed ICD-10-CM diagnosis code for cancer (**Appendix M: CANITD**)

[Appendix F - High-Risk Immunocompromised State Diagnosis and Procedure Codes](#)

[Appendix M - Cancer Diagnosis Codes](#)

DENOMINATOR INTERMEDIATE RISK CATEGORY

Patients otherwise qualifying for overall denominator, with either:

- any listed ICD-10-CM diagnosis code for intermediate-risk immunocompromised state; (**Appendix G: IMMUITD**)
- any listed ICD-10-CM diagnosis code for cirrhosis (**Appendix G: HEPFA2D**) and hepatic failure; (**Appendix G: HEPFA3D**)
- any listed ICD-10-CM diagnosis code for cystic fibrosis; (**ACSCYFD***)
- any listed ICD-10-CM diagnosis code for hemophilia (**HEMOPHD***)

[Appendix G - Intermediate-Risk Immunocompromised State Diagnosis Codes](#)

DENOMINATOR LOW RISK CATEGORY

Patients otherwise qualifying for overall denominator, and not meeting the inclusion criteria for the High Risk Category or the Intermediate Risk Category.

* See below for code list

Central venous catheter-related blood stream infection diagnosis code: (IDTMC3D)

T80211A Bloodstream infection due to central
 venous catheter, initial encounter

Cystic fibrosis diagnosis codes: (ACSCYFD)

E840	Cystic fibrosis with pulmonary manifestations	E848	Cystic fibrosis with Other manifestations
E8411	Meconium ileus in cystic fibrosis	E849	Cystic fibrosis, Unspecified
E8419	Cystic fibrosis with Other intestinal manifestations		

Hemophilia diagnosis codes: (HEMOPHD)

D66	Hereditary factor viii deficiency	D681	Hereditary factor xi deficiency
D67	Hereditary factor ix deficiency	D682	Hereditary deficiency of Other clotting factors
D680	Von willebrand's disease		